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Ethical Principles for Medical Research Involving	Recommendations Guiding Physicians in Biomedical
Human Subjects	Research Involving Human Subjects
A. INTRODUCTION	Introduction
1. The World Medical Association has developed the Declaration of Helsinki as a statement of ethical principles to provide guidance to physicians and other participants in medical research involving human subjects. Medical research involving human subjects includes research on identifiable human material or identifiable data.	Because it is essential that the results of laboratory experiments be applied to human beings to further scientific knowledge and to help suffering humanity, the World Medical Association has prepared the following recommendations as a guide to every physician in biomedical research involving human subjects. They should be kept under review in the future. It must be stressed that the standards as drafted are only a guide to physicians all over the world. Physicians are not relieved from criminal, civil and ethical responsibilities under the laws of their own countries.
2. It is the duty of the physician to promote and safeguard the health of the people. The physician's knowledge and conscience are dedicated to the fulfillment of this duty.	It is the mission of the physician to safeguard the health of the people. His or her knowledge and conscience are dedicated to the fulfillment of this mission.
3. The Declaration of Geneva of the World Medical Association binds the physician with the words, "The health of my patient will be my first consideration," and the International Code of Medical Ethics declares that, "A physician shall act only in the patient's interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient." 4. Medical progress is based on research which ultimately must rest in part on experimentation involving human subjects. 5. In medical research on human subjects, considerations related to the well-being of the human subject should take precedence over the interests of science and society.	The Declaration of Geneva of the World Medical Association binds the physician with the words, "The health of my patient will be my first consideration," and the International Code of Medical Ethics declares that, "A physician shall act only in the patient's interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient." Medical progress is based on research which ultimately must rest in part on experimentation involving human subjects. III.4. In research on man, the interest of science and society should never take precedence over considerations related to the well-being of the subject.
6. The primary purpose of medical research involving human subjects is to improve prophylactic, diagnostic and therapeutic procedures and the understanding of the aetiology and pathogenesis of disease. Even the best proven prophylactic, diagnostic, and therapeutic methods must continuously be challenged through research for their effectiveness, efficiency, accessibility and quality.	The purpose of biomedical research involving human subjects must be to improve diagnostic, therapeutic and prophylactic procedures and the understanding of the aetiology and pathogenesis of disease.
7. In current medical practice and in medical research, most prophylactic, diagnostic and therapeutic procedures involve risks and burdens.	In current medical practice most diagnostic, therapeutic or prophylactic procedures involve hazards. This applies especially to biomedical research.

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8. Medical research is subject to ethical standards that	
promote respect for all human beings and protect their	
health and rights. Some research populations are	
vulnerable and need special protection. The particular	
needs of the economically and medically disadvantaged	
must be recognized. Special attention is also required	
for those who cannot give or refuse consent for	
themselves, for those who may be subject to giving	
consent under duress, for those who will not benefit	
personally from the research and for those for whom the	
research is combined with care	
9. Research Investigators should be aware of the ethical,	
legal and regulatory requirements for research on human	
subjects in their own countries as well as applicable	
international requirements. No national ethical, legal or	
regulatory requirement should be allowed to reduce or	
eliminate any of the protections for human subjects set	
forth in this Declaration.	
	In the field of biomedical research a fundamental
	distinction must be recognized between medical
	research in which the aim is essentially diagnostic or
	therapeutic for a patient, and medical research, the
	essential object of which is purely scientific and without
	implying direct diagnostic or therapeutic value to the
	person subjected to the research.
B. BASIC PRINCIPLES FOR ALL MEDICAL	I. Basic Principles
RESEARCH	•
10. It is the duty of the physician in medical research to	III.1. In the purely scientific application of medical
protect the life, health, privacy, and dignity of the	research carried out on a human being, it is the duty of
human subject	the physician to remain the protector of the life and
	health of that person on whom biomedical research is
	being carried out.
11. Medical research involving human subjects must	I.1. Biomedical research involving human subjects must
conform to generally accepted scientific principles, be	conform to generally accepted scientific principles and
based on a thorough knowledge of the scientific	should be based on adequately performed laboratory and
literature, other relevant sources of information, and on	animal experimentation and on a thorough knowledge of
adequate laboratory and, where appropriate, animal	the scientific literature.
experimentation.	
12. Appropriate caution must be exercised in the	Special caution must be exercised in the conduct of
conduct of research which may affect the environment,	research which may affect the environment, and the
and the welfare of animals used for research must be	welfare of animals used for research must be respected.
respected.	wentate of annuals used for research must be respected.
respected.	

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13. The design and performance of each experimental procedure involving human subjects should be clearly formulated in an experimental protocol. This protocol should be submitted for consideration, comment, guidance, and where appropriate, approval to a specially appointed ethical review committee, which must be independent of the investigator, the sponsor or any other kind of undue influence. This independent committee should be in conformity with the laws and regulations of the country in which the research experiment is performed. The committee has the right to monitor ongoing trials. The researcher has the obligation to provide monitoring information to the committee, especially any serious adverse events. The researcher should also submit to the committee, for review, information regarding funding, sponsors, institutional affiliations, other potential conflicts of interest and	I.2. The design and performance of each experimental procedure involving human subjects should be clearly formulated in an experimental protocol which should be transmitted for consideration, comment and guidance to a specially appointed committee independent of the investigator and the sponsor provided that this independent committee is in conformity with the laws and regulations of the country in which the research experiment is performed.
incentives for subjects. 14. The research protocol should always contain a statement of the ethical considerations involved and should indicate that there is compliance with the principles enunciated in this Declaration 15. Medical research involving human subjects should 'be conducted only by scientifically qualified persons and under the supervision of a clinically competent medical person. The responsibility for the human subject must always rest with a medically qualified person and never rest on the subject of the research, even though the subject has given consent.	I.12. The research protocol should always contain a statement of the ethical considerations involved and should indicate that the principles enunciated in the present Declaration are complied with. I.3. Biomedical research involving human subjects should be conducted only by scientifically qualified persons and under the supervision of a clinically competent medical person. The responsibility for the human subject must always rest with a medically qualified person and never rest on the subject of the research, even though the subject has given his or her consent.
16. Every medical research project involving human subjects should be preceded by careful assessment of predictable risks and burdens in comparison with foreseeable benefits to the subject or to others. This does not preclude the participation of healthy volunteers in medical research. The design of all studies should be publicly available.	1.5. Every biomedical research project involving human subjects should be preceded by careful assessment of predictable risks in comparison with foreseeable benefits to the subject or to others. Concern for the interests of the subject must always prevail over the interests of science and society.
17. Physicians should abstain from engaging in research projects involving human subjects unless they are confident that the risks involved have been adequately assessed and can be satisfactorily managed. Physicians should cease any investigation if the risks are found to outweigh the potential benefits or if there is conclusive proof of positive and beneficial results.	I.7. Physicians should abstain from engaging in research projects involving human subjects unless they are satisfied that the hazards involved are believed to be predictable. Physicians should cease any investigation if the hazards are found to outweigh the potential benefits.

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18. Medical research involving human subjects should	I.4. Biomedical research involving human subjects
only be conducted if the importance of the objective	cannot legitimately be carried out unless the importance
outweighs the inherent risks and burdens to the subject.	of the objective is in proportion to the inherent risk to
This is especially important when the human subjects	the subject.
are healthy volunteers.	
19. Medical research is only justified if there is a	
reasonable likelihood that the populations in which the	·
research is carried out stand to benefit from the results	
of the research.	
20. The subjects must be volunteers and informed	III.2. The subjects should be volunteers-either healthy
participants in the research project.	persons or patients for whom the experimental design is
	not related to the patient's illness.
21. The right of research subjects to safeguard their	I.6. The right of the research subject to safeguard his or
integrity must always be respected. Every precaution	her integrity must always be respected. Every precaution
should be taken to respect the privacy of the subject, the	should be taken to respect the privacy of the subject and
confidentiality of the patient's information and to	to minimize the impact of the study on the subject's
minimize the impact of the study on the subject's	physical and mental integrity and on the personality of
physical and mental integrity and on the personality of	the subject.
the subject.	
22. In any research on human beings, each potential	I.9. In any research on human beings, each potential
subject must be adequately informed of the aims,	subject must be adequately informed of the aims,
methods, sources of funding, any possible conflicts of	methods, anticipated benefits and potential hazards of
interest, institutional affiliations of the researcher, the	the study and the discomfort it may entail. He or she
anticipated benefits and potential risks of the study and the discomfort it may entail. The subject should be	should be informed that he or she is at liberty to abstain
informed of the right to abstain from participation in the	from participation in the study and that he or she is free to withdraw his or her consent to participation at any
study or to withdraw consent to participate at any time	
without reprisal. After ensuring that the subject has	time. The physician should then obtain the subject's
understood the information, the physician should then	freely-given informed consent, preferably in writing.
obtain the subject's freely-given informed consent,	
preferably in writing. If the consent cannot be obtained	
in writing, the non-written consent must be formally	
documented and witnessed.	
23. When obtaining informed consent for the research	I.10. When obtaining informed consent for the research
project the physician should be particularly cautious if	project the physician should be particularly cautious if
the subject is in a dependent relationship with the	the subject is in a dependent relationship to him or her
physician or may consent under duress. In that case the	or may consent under duress. In that case the informed
informed consent should be obtained by a well-informed	consent should be obtained by a physician who is not
physician who is not engaged in the investigation and	engaged in the investigation and who is completely
who is completely independent of this relationship.	independent of this official relationship.

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24. For a research subject who is legally incompetent,	I.11. In case of legal incompetence, informed consent
physically or mentally incapable of giving consent or is	should be obtained from the legal guardian in
a legally incompetent minor, the investigator must	accordance with national legislation. Where physical or
obtain informed consent from the legally authorized	mental incapacity makes it impossible to obtain
representative in accordance with applicable law. These	informed consent, or when the subject is a minor,
groups should not be included in research unless the	permission from the responsible relative replaces that of
research is necessary to promote the health of the	the subject in accordance with national legislation.
population represented and this research cannot instead	Whenever the minor child is in fact able to give a
be performed on legally competent persons.	consent, the minor's consent must be obtained in
25. When a subject deemed legally incompetent, such as	addition to the consent of the minor's legal guardian.
a minor child, is able to give assent to decisions about	
participation in research, the investigator must obtain	
that assent in addition to the consent of the legally	
authorized representative.	
26. Research on individuals from whom it is not	II.5. If the physician considers it essential not to obtain
possible to obtain consent, including proxy or advance	informed consent, the specific reasons for this proposal
consent, should be done only if the physical/mental	should be stated in the experimental protocol for
condition that prevents obtaining informed consent is a	transmission to the independent committee (I, 2).
necessary characteristic of the research population. The	
specific reasons for involving research subjects with a	
condition that renders them unable to give informed	
consent should be stated in the experimental protocol for	
consideration and approval of the review committee.	
The protocol should state that consent to remain in the	
research should be obtained as soon as possible from the	
individual or a legally authorized surrogate.	
27. Both authors and publishers have ethical obligations.	I.8. In publication of the results of his or her research,
In publication of the results of research, the	the physician is obliged to preserve the accuracy of the
investigators are obliged to preserve the accuracy of the	results. Reports of experimentation not in accordance
results. Negative as well as positive results should be	with the principles laid down in this Declaration should
published or otherwise publicly available. Sources of	not be accepted for publication.
funding, institutional affiliations and any possible	
conflicts of interest should be declared in the	
publication. Reports of experimentation not in	
accordance with the principles laid down in this	
Declaration should not be accepted for publication.	
C. ADDITIONAL PRINCIPLES FOR MEDICAL	II. Medical Research Combined with Professional
RESEARCH COMBINED WITH MEDICAL CARE	Care (Clinical Research)
28. The physician may combine medical research with	II.6. The physician can combine medical research with
medical care, only to the extent that the research is	professional care, the objective being the acquisition of
justified by its potential prophylactic, diagnostic or	new medical knowledge, only to the extent that medical
therapeutic value. When medical research is combined	research is justified by its potential diagnostic or
with medical care, additional standards apply to protect	therapeutic value for the patient.
the patients who are research subjects.	
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29. The benefits, risks, burdens and effectiveness of a	II.2. The potential benefits, hazards and discomfort of a
new method should be tested against those of the best	new method should be weighed against the advantages
current prophylactic, diagnostic, and therapeutic	of the best current diagnostic and therapeutic methods.
methods. This does not exclude the use of placebo, or no	II.3. In any medical study, every patientincluding
treatment, in studies where no proven prophylactic,	those of a control group, if anyshould be assured of the
diagnostic or therapeutic method exists.	best proven diagnostic and therapeutic method. This
	does not exclude the use of inert placebo in studies
	where no proven diagnostic or therapeutic method
	exists.
30. At the conclusion of the study, every patient entered	
into the study should be assured of access to the best	
proven prophylactic, diagnostic and therapeutic methods	
identified by the study.	
31. The physician should fully inform the patient which	II.4. The refusal of the patient to participate in a study
aspects of the care are related to the research. The	must never interfere with the physician-patient
refusal of a patient to participate in a study must never	relationship.
interfere with the patient-physician relationship.	_
32. In the treatment of a patient, where proven	II.1. In the treatment of the sick person, the physician
prophylactic, diagnostic and therapeutic methods do not	must be free to use a new diagnostic and therapeutic
exist or have been ineffective, the physician, with	measure, if in his or her judgment it offers hope of
informed consent from the patient, must be free to use	saving life, reestablishing health or alleviating suffering.
unproven or new prophylactic, diagnostic and	
therapeutic measures, if in the physician's judgement it	
offers hope of saving life, re-establishing health or	
alleviating suffering. Where possible, these measures	
should be made the object of research, designed to	
evaluate their safety and efficacy. In all cases, new	
information should be recorded and, where appropriate,	
published. The other relevant guidelines of this	
Declaration should be followed.	
	III. Non-Therapeutic Biomedical Research Involving
	Human Subjects (Non-Clinical Biomedical Research)
	III.3. The investigator or the investigating team should
	discontinue the research if in his/her or their judgment it
	may, if continued, be harmful to the individual.